CLAIMS

1. A process for manufacturing an elastomeric sleeve (25) of a joint for electrical cables (11, 12), said sleeve (25) comprising:
   - an electric field-control element (26);
   - an electrical insulating element (27) surrounding said electric field-control element (26), and
   - at least two stress control screens (28a, 28b) positioned at the axial ends of said electrical insulating element (27),

   said process comprising the steps of:
   - providing said electric field-control element (26) and said stress control screens (28a, 28b) on a supporting element (30);
   - introducing said supporting element (30) into a mould (31, 41, 54) provided for moulding said electrical insulating element (27) made of an electrical insulating material (35);
   - filling with said electrical insulating material (35) the space radially external to said electric field-control element (26) and the space comprised between said electric field-control element (26) and said stress control screens (28a, 28b), said step of filling being carried out during said step of introducing, and
   - curing said electrical insulating material (35) to obtain said electrical insulating element (27) of said elastomeric sleeve (25).

2. Process according to Claim 1, wherein said step of introducing is carried out by coaxially moving said supporting element (30) into said mould (31, 41, 54).

3. Process according to Claim 1, wherein said step of introducing is carried out by moving said supporting element (30) in a substantially vertical direction (A, E).

4. Process according to Claim 1, wherein said step of filling comprises the step of extruding said electrical insulating material (35).

5. Process according to Claim 1, wherein said insulating material (35) is filled into said mould (31) according to a first direction (B) and said supporting element (30) is introduced into said mould (31) according to a second direction (A), said second direction (A) being substantially perpendicular to said first direction (B).

6. Process according to Claim 5, wherein said second direction (A) is a substantially vertical direction.

7. Process according to Claim 1, wherein a direction of filling (C) said insulating material (35) into said mould (41, 54) corresponds to a direction of introduction (A, E) of said supporting element (30) into said mould (41, 54).

8. Process according to Claim 7, wherein a verse of filling (C) of said insulating material (35) into said mould (54) corresponds to a verse of introduction (E) of said supporting element (30) into said mould (54).

9. Process according to Claim 7, wherein a verse of filling (C) of said insulating material (35) into said mould (41) is opposite to a verse of introduction (A) of said supporting element (30) into said mould (41).

10. Process according to Claim 1, wherein said step of filling comprises the step of distributing said insulating material (35) over the transverse cross

section of said mould (31, 41, 54).

11. Process according to Claim 1, further comprising the step of correlating said step of filling with the volume of the space to be filled with said insulating material (35).

12. Process according to Claim 11, wherein said step of correlating comprises the step of varying the advancing speed of said supporting element (30) into said mould (31, 41, 54) with respect to said volume.

13. Process according to Claim 12, wherein said step of correlating comprises the step of maintaining substantially constant the flow rate of said insulating material (35) being fed into said mould (31, 41, 54).

14. Process according to Claim 11, wherein said step of correlating comprises the step of varying the flow rate of said insulating material (35) with respect to said volume.

15. Process according to Claim 14, wherein said step of correlating comprises the step of maintaining substantially constant the advancing speed of said supporting element (30) into said mould (31, 41, 54).

16. Process according to Claim 1, wherein said step of curing comprises the step of providing a heat amount for crosslinking said insulating material (35).

17. Process according to Claim 1, further comprising the step of cooling said insulating material (35) after said step of curing.

18. Process according to Claim 1, further comprising the step of removing from said mould (31, 41, 54) said elastomeric sleeve (25) supported on said supporting element (30).

19. Process according to Claim 1, further comprising the step of releasing said elastomeric sleeve (25) from said supporting element (30).

20. An apparatus (60, 70) for manufacturing an elastomeric sleeve (25) of a joint for electrical cables (11, 12), said sleeve (25) comprising:

- an electric field-control element (26);
- an electrical insulating element (27) surrounding said electric field-control element (26), and
- at least two stress control screens (28a, 28b) positioned at the axial ends of said electrical insulating element (27),

said apparatus (60, 70) comprising:

- a grasping and handling device (67, 80) for holding and moving a supporting element (30) provided with said electric field-control element (26) and said two stress control screens (28a, 28b);
- a housing (65) for allocating a mould (31, 54) provided for moulding said electrical insulating element (27);
- a control unit (66, 68, 75, 81) for introducing said supporting element (30) into said mould (31, 54).

21. An apparatus (60, 70) according to Claim 20, further comprising at least one upright member (63, 72) along which said grasping and handling device (67, 80) is caused to move (F, H).

22. An apparatus (60, 70) according to Claim 21, further comprising at least one cross member (64, 74) for coupling said grasping and handling device (67, 80) to said upright member (63, 72).

23. An apparatus (60, 70) according to Claim 22, wherein said control unit (66, 68, 75, 81)

comprises at least one motor unit (66, 75) for moving said cross member (64, 74).

24. An apparatus (60, 70) according to Claim 23, wherein said at least one motor unit (66, 75) moves said cross member (64, 74) in a vertical direction (F, H).

25. An apparatus (60, 70) according to Claim 20, wherein said control unit (66, 68, 75, 81) comprises at least one hydraulic circuit (68) for moving said grasping and handling device (67, 80).

26. An apparatus (60, 70) according to Claim 25, wherein said at least one hydraulic circuit (68) moves said grasping and handling device (67, 80) in a substantially horizontal direction (G, L).

27. An apparatus (60, 70) according to Claim 20, further comprising a heating device for providing said mould (31, 54) with a predetermined heat amount.

28. An apparatus (60, 70) according to Claim 20, further comprising a cooling device for cooling the cured insulating material.